

distinctly claim the subject matter which Applicants regard as the invention. In particular, the Examiner objects to the presence of the "deep drawing" limitation, believing that such a recitation impermissibly imports a method limitation into an apparatus claim. Applicants have redrafted claim 20 to recite that the jacket body includes a deeply drawn metal.

Applicants note that the "deeply drawn" language is structural language that limits the "metal" recitation in the claim. See In re Garnero, 162 USPQ 221, 223 (CCPA 1969). In Garnero, the claim at issue, directed to a thermal insulation panel, recited "perlite particles which are interbonded one to another by interfusion". In rejecting the contention that the "interbonded" language should not be considered as a structural limitation, the Garnero court stated that "it seems to us that the recitation of the particles as 'interbonded one to another by interfusion between the surfaces of the perlite particles' is as capable of being construed as a structural limitation as 'intermixed', 'ground in place', 'press fitted', 'etched', and 'welded', all of which at one time or another have been separately held capable of construction as structural, rather than process, limitations." Id. at 223. Thus, just as the "interbonded" limitation in Garnero was held as a structural limitation to which an Examiner must accord full consideration in evaluating its patentable weight, so too must the "deeply drawn" limitation be considered here in its entirety as a structural limitation. This notion does not blur the boundaries between method and apparatus claims as separate categories of invention because as a factual matter a metal, say steel for example, that is deeply drawn will not be the same structurally as steel produced according to some other process. At some level, whether it be obvious to the naked eye or whether it be detectable only at the level of molecular geometry, deeply drawn metal will have structural characteristics attributable to its way of being produced. Applicants should be able to capture that structural distinctness in the manner recited in amended claim 20. Accordingly, in view of this discussion, Applicants submit

that the rejection of claim 20 has been obviated.

Claims 11-15 stand rejected under 35 U.S.C. § 102(b) as being anticipated by United States Patent No. 5,727,298 to Strong. Applicants have canceled claim 14 and incorporated its limitations into claim 11. Claim 11 now recites that the collar section includes not only at least one thread into which a disassembling screw can be screwed, but also at least one opening in which an assembling screw can be inserted so that the assembling screw engages a thread provided in the cylinder head. Moreover, as amended, claim 11 now recites that not only does the disassembling screw transmit a disassembling force when tightened, but also that the assembling screw transmits a hold-down force for holding down the fuel injector in the mounting hole. The device taught by Strong is capable only of removing shafts from a housing. See Abstract. The Strong device is incapable of applying a hold-down force via a tightening of an assembling screw because each screw 36 produces a disassembling force for removing shaft 32 as it is tightened (see column 3, lines 32-35); none of screws 36 produces a hold-down force for keeping shaft 32 in place. Thus, the device according to the claimed invention, because of its ability to be used to assemble and disassemble fuel injector assemblies, is significantly more versatile than the Strong device, which is capable only of removing previously mounted shafts 32. A user of the Strong device would thus need to resort to another device to hold-down the assembly, while a user of the claimed invention can use a single device for both operations. Accordingly, in view of this discussion, Applicants respectfully request withdrawal of the rejection of claims 11-13 and 15 under 35 U.S.C. § 102(b).

Claim 16 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Strong. Since claim 16 depends from claim 11, Applicants submit that this claim is patentable for at least the same reasons given in support of the patentability of claim 11.

Claims 18 and 19 stand rejected under 35 U.S.C. §

103(a) as being unpatentable over United States Patent No. 4,970,771 to Wood ("Wood") in view of Strong. Applicants submit that these claims are patentable for at least the same reasons given in support of the patentability of claim 11. Notwithstanding the above, Applicants submit the following additional argument in support of the patentability of claim 18.

Claim 18 recites the contact section as including an axial extension that transmits the hold-down force to the fuel injector. In considering this limitation, the Examiner asserts that lips 44 meet the axial extension. Applicants disagree with this reasoning. In particular, "lips 44 are dimensioned to be received beneath the spherical ball 38 and the support structure 46 of that ball 38, as shown in Figure 8." Column 4, lines 24-26 (emphasis added). If lips 44 are beneath ball 38 and its supporting structure 46, then it stands to reason that it is incapable of transmitting a hold-down force since in order for it do so it must be located at least substantially above, not beneath, the object of the hold-down force. Accordingly, for at least this additional reason, Applicants submit that claim 18 is patentable over the combination of Wood and Strong.

It is respectfully submitted that the subject matter of the present application is new, non-obvious, and useful. Prompt consideration and allowance of the application are respectfully requested.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADEIn The Claims

Claims 11, 15, 17, and 20 have been amended as follows:

11. (Amended) An assembling device for assembling and disassembling a fuel injector in a mounting hole of a cylinder head of an internal combustion engine, the assembling device comprising:

a jacket body having a contact section and a collar section, the jacket body at least partially surrounding the fuel injector, a hold-down force for holding down the fuel injector in the mounting hole and a disassembling force for disassembling the fuel injector being able to be exerted on the fuel injector via the contact section, the collar section protruding from the mounting hole, the collar section having at least one thread into which a disassembling screw can be screwed and at least one opening in which an assembling screw can be inserted so that the assembling screw engages a thread provided in the cylinder head,

wherein:

when the disassembling screw is tightened, the disassembling screw abuts the cylinder head and transmits a disassembling force to the collar section so that the assembling device with the fuel injector inserted into the assembling device is extracted from the mounting hole, and

a hold-down force is transmitted to the collar section by tightening the assembling screw, the hold-down force being such that the assembling device with the fuel injector inserted into the assembling device is held down in the mounting hole.

15. (New) The device according to claim [14] 11, wherein:  
a plurality of peripherally distributed openings is  
arranged on the collar section, each of the plurality of  
peripherally distributed openings corresponding to an  
assembling screw.

17. (Amended) The device according to claim [14] 11, wherein:  
the at least one thread and the at least one opening  
are dimensioned so that the assembling screw can be used  
as a disassembling screw.

20. (Amended) The device according to claim 11, wherein:  
the [device is manufactured from a piece of sheet  
metal by deep drawing] jacket body includes a deeply  
drawn metal.